We claim:

1. A combustion test sample for fire detectors comprising a mixture of pellets of the types of plastics normally found in the cargo compartment of an airplane.
2. A combustion test sample as in claim 1 further containing an internal heating element.
3. A combustion test sample as in claim 2 wherein said pellets are in a plurality of layers.
4. A combustion test sample as in claim 3 wherein said layers have different thicknesses.
5. A combustion test sample as in claim 4 wherein said pellets in each of said layers are fused together to form porous unitary masses.
6. A combustion test sample as in claim 5 wherein said porous unitary masses are fused together to form a single block.
7. A combustion test sample as in claim 6 wherein said heating element is sandwiched between adjoining layers of pellets.
8. A combustion test sample as in claim 7 comprising 2 layers of pellets, said top layer comprising a generally homogeneous mixture of about 22.7 parts by weight PVC and about 9.1 parts by weight each of PE, PS, Nylon, PBT, and PU and having a porosity of about 48% voids.
9. A combustion test sample as in claim 8 wherein said bottom layer comprises a generally homogeneous mixture of about 22.7 parts by weight PVC and about 9.1 parts by weight each of PE, PS, Nylon, PBT, and PU and having a porosity of about 22% voids.
10. A combustion test sample as in claim 9 wherein said bottom layer is twice as thick as said top layer.
11. The method of generating a desired atmosphere for testing the response of a fire detector which comprises providing a porous sample, providing a heating element within said sample, and energizing said heating element to cause said sample to release volatile thermal decomposition products to approximate smouldering.

12. The method of claim 11 further comprising constructing said sample of a mixture of the types of plastics normally found in the cargo compartment of an airplane.
13. The method of claim 12 further comprising placing a flammable liquid on said porous sample, providing an ignition source for said flammable liquid, and simultaneously energizing said ignition source and said heating element.
14. The method of claim 12 further comprising constructing said sample in a plurality of layers.
15. The method of claim 14 further comprising constructing said layers in different porosities.
16. The method of claim 15 further comprising constructing said layers in different thicknesses.
17. The method of claim 16 further comprising placing said heating element in the interface between two of said layers.